

CLAIMS

1. (Canceled)

2. (Canceled)

3. (Canceled)

4. (Withdrawn) A method for removing wine pomace from a fermentation tank, said method comprising the steps of; conveying pomace using a conveyor means from a fermentation tank to a receiver bin outside the tank whereby the pomace is not unduly macerated, and guiding pomace remaining pomace beyond the collection path of the conveyor means using a mechanical sweeper.

5. (New) A wine pomace extraction apparatus for the purpose of removing the residue of wine fermentation known as pomace from a fermentation tank and generally for extracting material from tanks, comprising

a support cart having a front end and a rear end, a substantially horizontal rectangular frame having forward legs and rear legs,

a conveyor means having a proximal end, a distal end, collection path, and a longitudinal axis suitable for transporting pomace to a receiver bin, said conveyor means is mounted to said frame of support cart, said conveyor means so engineered as to permit insertion of said distal end into an entry portal of a tank and said proximal end positioned over said receiver bin, and

a mechanical sweeper mounted to said conveyor means whereby sweeper guides pomace to the conveyor means collection path.

6. (New) A wine pomace extraction apparatus for the purpose of removing the residue of wine fermentation known as pomace from a fermentation tank and generally for extracting material from tanks, comprising

- a support cart having a front end and a rear end, a substantially horizontal rectangular frame having forward legs, rear legs, a docking plate attached to said front end, wherein in said docking plate has latches for securing to an entry portal of a fermentation tank, and a hydraulic pressure system for providing power and control,
- a conveyor means having a proximal end, a distal end, a width, sides, collection path, and a longitudinal axis suitable for transporting pomace, said conveyor means is mounted to said frame of support cart so as to permit said conveyor means to move and be positioned longitudinally with respect to said frame of said support cart with said distal end protruding from said forward end of said support cart and said proximal end positioned to deliver transported pomace to a receiver bin, said conveyor means powered by said hydraulic pressure system, said conveyor means width so engineered as to permit insertion into said entry portal, and
- a mechanical sweeper mounted to said conveyor means whereby sweeper guides pomace to the conveyor means collection path when activated and retracted against said conveyor means when not activated, said mechanical sweeper powered by said hydraulic pressure system.

7. (New) The wine pomace extraction apparatus according to Claim 6 wherein said forward legs and rear legs have adjustable length.
8. (New) The wine pomace extraction apparatus according to Claim 6 wherein said docking plate is pivotally attached to said front end of said support chart.
9. (New) The wine pomace extraction apparatus according to Claim 6 wherein said conveyor means is a belt conveyor having a frame supporting a longitudinally positioned conveyor belt having a plurality of cleats secured at intervals to stand perpendicular to said belt, and a hydraulic drive motor suitable to propel said conveyor belt.

10. (New) The wine pomace extraction apparatus according to Claim 6 wherein said mechanical sweeper comprises sweeper wings having arms of length approximate to the radius of said tank, each pivotally attached to said conveyor means at locations, with sweeper wings attached to the sides of said conveyor means, so as to permit said sweeper wings to move through an arc pivoting near the center of said tank and radially extending to the perimeter of said tank, at least one sweeper wing mounted to each side of said conveyor means, said sweeper wings being positioned by hydraulically powered cables, said cables guided by pulleys also attached to the conveyor means whereby said sweeper wings guide pomace to the conveyor means.

11. (New) The wine pomace extraction apparatus according to Claim 10 wherein said mechanical sweeper further comprises winglet arms having proximal and distal ends, pivotally attached at said proximal end to said conveyor means and having a guide pulley attached to said distal end, said winglet arms deployable by pivoting said arms away from said conveyor means to a position to guide said sweeper wing cables.

12. (New) The wine pomace extraction apparatus according to Claim 10 wherein said sweeper wing further comprises a flap extending the length of said sweeper wing arm, being hinged to said arm and extending downwardly from said arm wherein the range of motion of said hinge is restricted so as to permit the flap to rotate upwardly towards said arm when said sweeper wing is deploying away from said conveyor means while restricted to a downward position when said sweeper wing is retracting towards said conveyor means thereby improving the efficiency of the sweeping action of said sweeper wings.

13. (New) The wine pomace extraction apparatus according to Claim 6 wherein wheels are attached to said support cart forward and rear legs thereby permitting the apparatus to be maneuvered into position.

14. (New) The wine pomace extraction apparatus according to Claim 6 wherein said conveyor means is powered by a hydraulic drive motor.

15. (New) The wine pomace extraction apparatus according to Claim 6 wherein said conveyor means is a screw conveyor.

16. (New) The wine pomace extraction apparatus according to Claim 6 wherein said conveyor means is a bucket conveyor.

17. (New) The wine pomace extraction apparatus according to Claim 6 wherein said conveyor means is a vibrating bed conveyor.

18. (New) A method of using the wine pomace extraction apparatus according to Claim 5 for removal of wine pomace from a fermentation tank having an entry portal so as not to unduly macerate the wine pomace, said method comprising the steps of:

draining the fermented wine from the tank having an entry portal leaving the wine pomace settled in the bottom of the tank,
opening the tank entry portal,
providing said wine pomace extraction apparatus comprising a support cart, a conveyor means mounted to said support chart, and a mechanical sweeper attached to said conveyor means,
preparing the tank entry portal for receiving said apparatus,
maneuvering said apparatus into position into the entry portal,
docking said apparatus with the entry portal,
inserting said conveyor means of apparatus into the fermentation tank through the entry portal,
activating said conveyor means to transport pomace to a receiver bin until the majority of pomace is extracted,
activating said mechanical sweeper of apparatus, and
sweeping remaining pomace with said mechanical sweeper into the collection path of said conveyor means.